

CLAIMS

What is claimed is:

1. A screen for use in a glass fiber bushing system, comprising:
an electrically conductive elongate inner screen plate having at least one
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elongate fold therein and at least two elongate divergent surfaces on opposing sides of
the fold, each of the divergent surfaces having an upper end and opposing edges
tapering downward from the upper ends, the upper ends of the divergent surfaces
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diverging from one another, each of the divergent surfaces having a plurality of holes
therein; and
- ³⁸
at least two electrically conductive outer screen plates, each one of the
screen plates being attached to one of the edges of the divergent surfaces and
extending between the divergent surfaces, each of the outer screen plates surfaces
⁴⁶
having a plurality of holes therein.
2. The screen of claim 1, wherein the upper ends of the divergent surfaces
each has an elongate tab and the outer screen plates each has an upper end and a tab at
the upper end.
3. The screen of claim 1, wherein the edges of the divergent surfaces are
disposed at an angle less than 90 degrees relative to upper ends of the divergent
surfaces.
4. The screen of claim 1, wherein the inner screen plate has a V-shaped
cross-section and the outer screen plates are triangular.
5. The screen of claim 1, wherein the inner screen plate has a W-shaped
cross-section and the outer screen plates are W-shaped.

6. The screen of claim 1, wherein the inner screen plate has at least two folds including the at least one fold and at least one elongate flat surface extending between the divergent surfaces, and wherein outer screen plates are trapezoidal.

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7. A glass fiber bushing system comprising:
a bushing body having opposing end plates; and
a screen within the bushing body, the screen comprising opposing ends,
each of the ends having an upper portion and a lower portion, the upper portion of
each of the ends being attached to one of the end plates, the lower portion of each of
the ends being spaced apart from the end plates.

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8. The system of claim 7, wherein the end plates each has an upper end and
the upper portions of the ends of the screen are attached to the upper ends of the end
plates.

9. The system of claim 7, wherein the end plates each has an upper end and
the upper portions of the ends of the screen have tabs, the tab of the ends being
attached to the upper ends of the end plates.

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10. The system of claim 7, wherein the screen has a V-shaped cross-section
and the side ends are triangular.

25 11. The system of claim 7, wherein the screen has a W-shaped cross-section
and the side ends are W-shaped.

12. A glass fiber bushing system comprising:

an electrically conductive bushing body comprising opposing end plates, elongate side plates extending between the end plates, a tip plate extending between the end plates and the side plates, and an opening atop the bushing body defined by a
5 throat portion of the bushing body;

a pair of opposing electrically conductive terminals, each one of the terminals being connected to one of the end plates; and

an electrically conductive screen located within the bushing body, the screen comprising:

10 an elongate inner screen plate having at least one elongate fold therein and at least two elongate divergent surfaces on opposing sides of the fold, each divergent surface having an upper end and opposing edges, the upper ends of the divergent surfaces diverging from one another, each of the divergent surfaces having a plurality of holes therein; and

15 at least two outer screen plates attached to the edges of the divergent surfaces and extending between the divergent surfaces, each of the outer screen plates having an upper end attached to one of the end plates of the bushing body, each of the outer screen plates having a plurality of holes therein.

20 13. The system of claim 12, wherein the upper end of each of the divergent surfaces has an elongate tab and the outer screen plates each has an upper end and a tab at the upper end.

25 14. The system of claim 12, wherein the edges of the divergent surfaces are disposed at an angle less than 90 degrees relative to upper ends of the divergent surfaces.

15. The system of claim 12, wherein the screen has a V-shaped cross-section and the outer screen plates are triangular.

16. The system of claim 12, wherein the screen has a W-shaped cross-
5 section and the outer screen plates are W-shaped.

17. The system of claim 12, wherein the inner screen plate has at least two folds including the at least one fold and at least one elongate flat surface extending between the divergent surfaces, and wherein outer screen plates are trapezoidal.

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18. The system of claim 12, wherein the tip plate has a plurality of holes therein.

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19. The system of claim 18, wherein the holes in the tip plate have tubular orifices therein.

20. The system of claim 19, wherein the tubular orifices are laser welded in the holes.